

What is claimed is:

1. A three-dimensional biocompatible implant, the implant comprising a subassembly that resists compression when implanted in a warm-blooded animal.
2. The implant of claim 1, wherein the subassembly comprises woven or braided fibers.
3. The implant of claim 1, wherein the subassembly is produced using a circular weft knitting process.
4. The implant of claim 3, wherein the subassembly is produced using a circular weft knitting process with an internal support.
5. The implant of claim 3, wherein the subassembly is produced using a circular weft knitting process without an internal support.
6. The implant of claim 1, wherein the subassembly is produced using a circular warp knitting process.
7. The implant of claim 1, wherein the subassembly is produced using a braiding process.
8. The implant of claim 1, wherein the subassembly is produced using a nonwoven film and/or wherein the subassembly comprises pores.
9. The implant of claim 8, wherein the pores are 50-2000 microns in diameter.
10. The implant of claim 9, wherein the implant has a conical form.
11. The implant of claim 1, wherein the implant comprises polyaryletherketone.
12. The implant of claim 1, further comprising an onlay

13. The implant of claim 1, further comprising an anchor.

14. The implant of claim 1, further comprising a means for stabilizing the implant during placement within a warm-blooded animal

15. A method for producing a three-dimensional biocompatible implant, the method comprising one or more of the following steps:

- a) extruding a biocompatible polymer into a fiber,
- b) transforming the fiber into a compression resistant subassembly,
- c) braiding or weaving the subassembly into a three dimensional structure,
- d) heat setting the structure into the desired shaped article, and, optionally,
- e) attaching the shaped article to a complementary implant article.

16. The method of claim 15, further comprising removing shaping mandrels or intraluminal support.

17. A method for repairing a defective tissue in a patient, the method comprising applying the three-dimensional biocompatible implant to the defect by way of a surgical procedure.

18. The method of claim 17, wherein the patient has a hernia.

19. A kit comprising an implant of claim 1, wherein the implant is sterile.

20. A method of delivering the implant of claim 1 to a patient's body, the method comprising exposing a defective tissue on or within the patient's body and placing the implant on or over the tissue.

21. The method of claim 20, wherein the implant is compressed, by hand or by a device, prior to being placed on or over the tissue.

22. A method for producing a three-dimensional biocompatible implant, the method comprising one or more of the following steps:

- a) extruding a biocompatible polymer into a film,
 - b) transforming the film into a subassembly,
 - c) shaping the subassembly into a three dimensional structure,
 - d) heat setting the structure into the desired shaped article, and, optionally,
 - e) attaching the shaped article to a complementary implant article.
23. The implant of claim 1, wherein the implant has a surface area to volume ratio less than about 5.0.
24. The three dimensional implant of claim 23, wherein the surface area to volume ratio is less than about 4.0, less than about 3.0, less than about 2.0, or is about 1.0.
25. The three-dimensional implant of claim 23, wherein the biocompatible material comprises a non-absorbable polymer or copolymer.
26. The three-dimensional implant of claim 25, wherein the non-absorbable polymer or copolymer comprises polypropylene, polyethylene terephthalate, polytetrafluoroethylene, polyaryletherketone, nylon, fluorinated ethylene propylene, polybutester, or silicone.
27. The three-dimensional implant of claim 23, wherein the biocompatible material comprises an absorbable polymer or copolymer.
28. The three-dimensional implant of claim 27, wherein the absorbable polymer or copolymer comprises polyglycolic acid (PGA), polylactic acid (PLA), polycaprolactone, or polyhydroxyalkanoate.
29. The three-dimensional implant of claim 23, wherein the biocompatible material comprises a biological material.

30. The three-dimensional implant of claim 29, wherein the biocompatible material is collagen.
31. A three-dimensional implant comprising two or more layers of two-dimensional biocompatible material with interconnecting supports, said implant constructed to securely fit within a tissue or muscle wall defect.